

GREENHOUSE SURVEY

Response Summary

April 9, 2002

Summary of Responses to Questions 1-5

Greenhouse Survey

Respondent High School	Respondent Name	School Enrollment	Ag Student Enrollment	Greenhouse Size	Headhouse Size	Greenhouse Attached?	Directional Position of Greenhouse	Approx. Cost
Lodi	Glenda Crook	500+	125-150	16' x 40'	n/a	yes	WNW (lean-to)	\$11,000
Oconto Falls	Eric Larsen	630	180	20' x 50'	20' x 20'	yes	S (lean-to)	\$28,000*
Oconto Falls MS	Brent Iverson	630	120	800 sq. ft.	200 sq. ft.	yes	S	\$40,000
Chilton	Amy Buechel	540	150	700 sq. ft.	in process	yes	NW	in process
Viroqua	Lloyd Hardy	500	120	28' x 56'	uses shop	no	E-W	\$10,000
Platteville MS	Jim Favreau	600	100	?	?	yes	SE corner	\$20,000+
Pulaski MS	Jared Schaffner	1100	250	28' x 40'	28' x 40'	yes	E	?
Pulaski	Terry Erdmann	1100	295	30' x 50'	30' x 28'	yes	SW**	
Green Bay West	Jim Zeinert	1300	150	24' x 60'	20' x 24'	no	E-W	\$75,000†
Sparta	Steve Schauf	970	?	20' x 60'	?	yes	S	\$56,000
Brillion	Gordie Gasch	300	90	40' x 20'	lab area	yes	SW	?
Whitehall	Melina Goplin	400	135	30' x 32'	n/a	no	N-S	?
Reedsburg	Sandy Cordes	860	280	20' x 40'	n/a	yes	W	?
Edgerton	Rick Reese	630	120	30' x 30'	12' x 10'	yes	W	\$50-75,000‡
Gresham	Jeff Zobeck	110	45+	12' x 24'	?	yes	N-S	\$4,000#
Waterloo	Steve Leistco	320	85	30' x 25'	12' x 25'	no	E-W	\$32,000

*6 years ago

**Cal Geiger at Mayville has specs for orienting greenhouses for your latitude and longitude

†cost is due to automatic heat and ventilation control

‡cost depends upon what is included

#10 years ago—replaces plastic every year

Additional comments from Terry Erdman on questions 1-5: Let me know if your architects say you can't attach your greenhouse to your school because I have found a way to do it!! Greenhouse from United Greenhouses in Jefferson area Dave Johnson there is the only person to work with.

Additional comments from Jeff Zobeck on questions 1-5: Greenhouse heated by steam heat through the school (this is not recommended -I only have heat in the greenhouse when there is heat in the school i.e., night cycle =no heat, weekend cycle =no heat, you get the idea). I should really have supplemental heat source, but don't. We work around it. Only advantage is that I have no fuel bills to take out of budget to heat the greenhouse, which can get really expensive.

Questions 6-12

Narrative Responses

6. Briefly describe the technology you have available in the greenhouse (i.e., automatic watering system, automatic heat and cooling system, etc.) Please make note of the necessity for that specific technology.

Glenda Crook -Lodi High School

When built it included cement floor and walls, electricity, water spigots, sink, back-flow preventer, ceiling vents, heater, lights, light timer, and benches. I have added an automatic watering system. I have no control over the temperature, which is bad.

Eric Larsen -Oconto Falls

Fertilizer injection, auto watering, heating, and cooling all automatic--would recommend any computer aided climate control you can get, but it is expensive and not necessary if you are attentive to the greenhouse.

Brent Iverson -Oconto Falls Middle School

Fertilizer/water/heat. I would get a warning system that calls you.

Amy Buechel-Chilton

No response

Lloyd Hardy -Viroqua

Il have a hose and hose on fertilizer attachment, but no technology

Jim Favreau -Platteville

Just forced-air heat and auto ventilation. We were to get exactly what was built at Richland Center. However, changes were made that no one knew of. You really don't need any fancy technology—you can do a lot with just a basic structure. Fancy watering systems costs big bucks. Besides, students need to know how to properly water different kinds of plants.

Jared Schaffner -Pulaski

Everything can be controlled through the automated system except for spraying insecticides.

Terry Erdmann -Pulaski

All automated! ! ! ! Awesome! !

Jim Zeinert -Green Bay West

Automatic heat and ventilation control. It has side and roof vents which are controlled by computer.

Steve Schauf-Sparta High School

Albert Lauer greenhouse-Mark Brum (651)-423-1651

-built by A. Lauer crew as subbed out by Kramer Bros.

-Wadsworth Envirostep computer control system (800)-482-7943

-no mechanical ventilation; sidewall to ridge vent convection/draft air flow

Gordie Gasch -Brillion Ag Department

We have automatic heat and cooling, vents open in the side wall and ceiling. We have 3 fans that can blow air through water soaked filters to cool more in the summer. We haven 't used the greenhouse in the summer yet - salesman said it will get hot. We do not have automatic watering but am going to try to get it because plants really dry out over weekend.

Melinda Goplin -Whitehall High School

I added an auto watering system this fall, but I'd rather have spent the money on something else now that I have it. It is good for the kids to see the technology, but also good for them to know how to do the watering by hand. Goes both ways. No cooling system, large LP space heater does a pretty good job, but there are hot and cold spots that are hard to control.

Sandy Cordes -Reedsburg

Rotors that open at top and side when it reaches whatever temp you set it for (we have it set at 74 degrees). No other automation. Only cold water available, one faucet. We used silo staves and snow fence to build our benches as there was no money budgeted for the inside of the greenhouse.

Lori Berget -TriCounty

My greenhouse is 12' x 20'. No automatic water -just a head room with a sink and a hose spigot. We had to hook up a hose and water the plants -a pain but at least there was water. We built the tables out of PVC pipe and plywood -with a thought of possibly trying hydroponics. We built a seed germination "hot house " that we used in the head room to start the seeds.

Rick Reese -Edgerton

Everything-including computer monitoring.

Jeff Zobeck-Ag Instructor at Gresham Community School

Nothing too technical. Automatic louvers for cooling. Best to have separate heat control for your greenhouse. Heat sensing to notify you of the heat going out by phone.

Steve Leistico -Waterloo High School

We have a Growmate 1000 series which automatically controls heat cooling and opening and closing of roof ventilation. No automated watering system.

7. How was your greenhouse building project funded (i.e., school, FFA, Alumni, business donations, etc.)?

Glenda Crook -Lodi High School

Original costs school funded in the new building budget when we built the new high school. Any additions have come from Carl Perkins funds or Ag budget

Eric Larsen -Oconto Falls

Referendum

Brent Iverson -Oconto Falls Middle School

No response

Amy Buechel-Chilton

Included in school referendum

Lloyd Hardy -Viroqua

FFA, FFA Alumni, and donations (give us \$100.00 now and we will give you \$25.00 worth of plants for 4 years), this not only raised money, but also built our customer base

Jim Favreau -Platteville

Total remodeling project of the school-no special funds

Jared Schaffner -Pulaski

As part of the general referendum passed to build new school

Terry Erdmann -Pulaski

All school funded

Jim Zeinert -Green Bay West

The construction costs of the greenhouse were funded by a district wide referendum, which included the cost of the greenhouse.

Steve Schauf-Sparta High School

Funded by community referendum—part of a \$28,000,000 middle school and high school renovation project.

Gordie Gasch -Brillion Ag Department
It was built as part of building a new school.

Melinda Goplin -Whitehall High School
Not sure at the time. I think the Ag Teacher just built it with minimum supplies with a class of his.

Sandy Cordes -Reedsburg
School. FFA and Ag budget pay for plants, seeds, soil, etc.

Lori Berget -TriCounty
The school funded the project -but the Alumni helped see that it made it through. Maryellyne Rear is a big supporter of the Ag program and helped me do research for the greenhouse. She might be willing to answer questions. Hope it helps.

Rick Reese -Edgerton
Part of last referendum

Jeff Zobeck-Ag Instructor at Gresham Community School
Combination of things years ago. Now the budget and a little FFA money earned through projects fund it 100%.

Steve Leistico -Waterloo High School
School did 70% and FFA Alumni did 30%.

8. Whose budget is mainly responsible for the greenhouse operation? Is it the ag department's budget, a separate greenhouse budget, school budget, etc.?

Glenda Crook -Lodi High School
I budget for the greenhouse out of my ag budget. I set aside \$300 the first year and have used the money from poinsettia sales and bedding plant sales to keep the greenhouse going. I do have a separate greenhouse budget to keep the money straight. I now have about \$450 set aside for the greenhouse, but this money is used basically for plant materials. Any other supplies I try to buy through my ag budget.

Eric Larsen -Oconto Falls
Ag budget. Also all plant sales go back into an ag resale account, which I use for most of my greenhouse funding. I have made mine self-sufficient, kind of like a business.

Brent Iverson -Oconto Falls Middle School
Ag budget

Amy Buechel-Chilton
Ag and science will share the budget.

Lloyd Hardy -Viroqua
The FFA pays for everything except the heat

Jim Favreau -Platteville
School district pays for utilities. Ag budget pays for supplies and materials

Jared Schaffner -Pulaski
Ag department for all supplies/maintenance--school pays utilities.

Terry Erdmann -Pulaski
Ag budget, but I started an Advanced Greenhouse Manger class, so we run it like a business.

Jim Zeinert -Green Bay West
The greenhouse budget is through the dept budget, which costs about \$1,200/year for supplies, with the school district picking up heat and water costs.

Steve Schauf-Sparta High School

Set up a separate Greenhouse account, all expenses paid out from and revenue taken in from crop sales return. Will possibly turn over to FFA as program evolves—ag dept oversees the budgeting, sales, everything.

Gordie Gasch -Brillion Ag Department

It will be the Ag budget. The biology teacher also has his room connected to the greenhouse so some cost will come from his budget.

Melinda Goplin -Whitehall High School

Is it the ag dept.'s budget, a separate greenhouse budget, school budget, etc. Ag budget through school covers everything I need.

Sandy Cordes -Reedsburg

Ag budget

Lori Berget -TriCounty

No response

Rick Reese -Edgerton

Ag-Ed

Jeff Zobeck-Ag Instructor at Gresham Community School

Ag dept budget. I have had a lot of donations including a greenhouse business that went out of business. They donated a lot of pots, baskets, etc. I have enough supply left from to last for years to come--maybe not all perfect fits for sizes of pots and shapes and types, but definitely helpful in saving money.

Steve Leistico -Waterloo High School

Ag dept

9. How much did the budget increase with the addition of the greenhouse?

Glenda Crook -Lodi High School

None

Eric Larsen -Oconto Falls

Need about \$2,000 a year, after the initial start-up costs

Brent Iverson -Oconto Falls Middle School

No response

Amy Buechel-Chilton

No response

Lloyd Hardy -Viroqua

\$0.00

Jim Favreau -Platteville

Zip

Jared Schaffner -Pulaski

Did not

Terry Erdmann -Pulaski

None

Jim Zeinert -Green Bay West

No response

Steve Schauf-Sparta High School
None—try to make it support itself

Gordie Gasch -Brillion Ag Department
About \$1,000

Melinda Goplin -Whitehall High School
I spend about \$500/year on supplies, seeds, fertilizer, pots, soil, etc. You can get a lot donated for experimental purposes. It will cost more if you are doing sales open to the public.

Sandy Cordes -Reedsburg
I am allowed \$600 per year for greenhouse expenses from my budget at this point.

Lori Berget -TriCounty
No response

Rick Reese -Edgerton
None -FFA pays supplies from plant sales.

Jeff Zobeck-Ag Instructor at Gresham Community School.
Not much as discussed in my previous answer

Steve Leistico -Waterloo High School
About \$700 to \$800

10. What are examples of classroom projects/fundraisers you provide your students and FFA through the greenhouse?

Glenda Crook -Lodi High School
We raise poinsettias, force bulbs, house plants, and bedding plants. All funds go back into the greenhouse account.

Eric Larsen -Oconto Falls
We do business plan for a large plant sale we hold. We also do quite a few experiments with plants as far as propagation types are concerned.

Brent Iverson -Oconto Falls Middle School
Plant sale

Amy Buechel-Chilton
We are planning on doing poinsettias plus Easter lilies and bedding plants in the spring. Science wants to use part of it for experiments.

Lloyd Hardy -Viroqua
Spring bedding plant sale, poinsettia sale. Wiring, heating, building tables—many more

Jim Favreau -Platteville
Hanging baskets and plant sale in the spring, Poinsettias at Christmas. Trying to make money will cut into the amount of area you will have for basic projects.

Jared Schaffner -Pulaski
Poinsettia sale, bedding plant sale, terrariums, all sorts of other plant related experiments

Terry Erdmann -Pulaski
Poinsettias, geraniums, bedding plants

Jim Zeinert -Green Bay West
The crops that we raise are poinsettias, Easter lilies, and spring bedding plants. The students could do more experiments if time and space allows.

Steve Schauf-Sparta High School

- during fall emphasize training and experimentation
- during spring emphasis on flower crop (mostly annuals) sales
- must sell on weekends during April and May

Gordie Gasch -Brillion Ag Department

We are not going to mass produce flowers or bedding plants to sell. We are going to set up a little business and produce hanging baskets or pots and have a sale in spring. Kids are going to get 1/2 the profits. We also hope to "plantscape" the school with house plants and have kids have this as an SAE project.

Melinda Goplin -Whitehall High School

We raise poinsettias in fall and bedding plants in the spring. We only grow for small sale and personal/family use for students in class or teachers in school.

Sandy Cordes -Reedsburg

We do projects with elementary schools and CDS students. No fundraisers through greenhouse. We are only allowed one major fundraiser per year. We make things for holidays for the kids and for area community service items. I am not allowed to use any chemicals in the greenhouse, and I do not want to do a fundraiser and have to worry about pests and losing money. It's basically just a classroom lab that we try to get others to learn from also.

Lori Berget -TriCounty

No response

Rick Reese -Edgerton

Planting, vegetative cuttings-propagation, plant ID, salesmanship, transplanting, plant care diseases, fertilizing, bedding plant sale, Poinsettia crop, decorating, poinsettia plant sale.

Jeff Zobeck-Ag Instructor at Gresham Community School

We grow annuals to be sold in the spring and early summer months to local people, mainly staff and parents. We also supply plants to the school landscape each year and to a village whiskey barrel project that we have ongoing with them. Businesses purchase the barrels and get a name plate on them. The hort. class fills the barrels with flowers, and the village places them around town. The Boy Scouts water them when necessary. The village gives us a donation each year to help offset costs.

Steve Leistico -Waterloo High School

We sell spring bedding plants and hanging baskets.

11. From whom do you order your yearly greenhouse supplies (local greenery, regional company, other outside resources, etc.)?

Glenda Crook -Lodi High School

I order bedding plants, bulbs and poinsettias from Colorlink a division of Ball Seed. Ribbon, foil, pots, dishes, come from Schroth Wholesale in Menasha or Hummert's.

Eric Larsen -Oconto Falls

Hummert, for everything.

Brent Iverson -Oconto Falls Middle School

No response

Amy Buechel-Chilton

I've been told that Carlin Suppliers is good

Lloyd Hardy -Viroqua

Carlin's Supply in Milwaukee

Jim Favreau -Platteville

Hummert, Carlin's and Cushman 's in Belmont

Jared Schaffner -Pulaski

Carlin Horticultural Sales out of Milwaukee and work with local greenhouses to buy some plants

Terry Erdmann -Pulaski

Schroeder's Greenhouses in Green Bay

Jim Zeinert -Green Bay West

We get all of our supplies from Carlin Sales of Milwaukee.

Steve Schauf-Sparta High School

Wonderful local support (could not do without) from Paul Solberg, owner of Sparta Floral (wholesale greenhouse operator)—obtains most supplies through Carlin -horticulture supply out of Milwaukee. Any questions, I call Paul, an invaluable asset.

Gordie Gasch -Brillion Ag Department

Some locally and some from national (Hummer-t 's).

Melinda Goplin -Whitehall High School

JR Johnson, Minneapolis or Rough Bros., Ohio

Sandy Cordes -Reedsburg

I order from local vendors.

Lori Berget -TriCounty

No response

Rick Reese -Edgerton

Hummert's, Carlin 's, K&W Greenery

Jeff Zobeck-Ag Instructor at Gresham Community School

Mainly get supplies from local greenhouses. For example, we buy all of our media from a local greenhouse and lots of mother plants for cuttings and labs, etc. Buy seeds from any seed company like Ball Seeds, etc.

Steve Leistico -Waterloo High School

Hummer-t International

12. Other comments/suggestions:

Glenda Crook -Lodi High School

My greenhouse is full to capacity all of the time. I would go bigger. Make sure they install the watering system and fertilizer injector right away. Have access to the greenhouse separate from the rest of the school so you can have students check it on the weekends. We can't have students check ours because they would have to have access to the school, and that is not allowed. I had to fight to get reimbursed my first year for mileage because I had to drive back every weekend to water before we got the watering system. Make sure you have control of the temperature. Get good lights and a shade system for summer.

Eric Larsen -Oconto Falls

Make sure you have fan-style ventilation--my biggest problem in my greenhouse.

Brent Iverson -Oconto Falls Middle School

No response

Amy Buechel-Chilton

No response

Lloyd Hardy -Viroqua

Greenhouse is a lot of work, you will be married to it from Feb 1 until June 1, but I would be lost without mine.

Jim Favreau -Platteville

Again, most of us want a state-of -the art-building. If we did it all over again, we would get a stand alone structure that is bare bones. Get a big enough structure (lean-to's are difficult for this due to the lack of space) and sell the Science Dept on using it as well. Show the variety of cross-curriculum projects from math to art to English that can be covered in a greenhouse. Students of all abilities, including handicaps can successfully use the structure. Good-Luck!

Jared Schaffner -Pulaski

No response

Terry Erdmann -Pulaski

Give me a call at (920)-822 -6785

Jim Zeinert -Green Bay West

Hope this helps

Steve Schauf-Sparta High School

No response

Gordie Gasch -Brillion Ag Department

At our other school we had a separate "sunroom" and we had a lot of plant vandalism -hopefully by having this greenhouse attached, we can keep better track of everything. Good luck.

Melinda Goplin -Whitehall High School

The greenhouse is wonderful. I just had a student from RF speak to my classes on career interests. She said the fastest growing major is Ornamental Horticulture like fields. As teachers we want our students to have the upper hand before they get to college classes. Having a school greenhouse helps us prepare students for their future. I often share the space, plants, and experiments with the science department. (Twice the student exposure for the same cost!) I also have students do their SAE projects in the greenhouse, so they are the managers (teaching leadership skills) and complete their individual projects for SAE or Science Fair right at school. (All the learning that goes on is amazing!) When I have the students rank the topics taught during the course of the year, greenhouse activities are always ranked top!! They love the hands on opportunities a greenhouse provides!

Sandy Cordes -Reedsburg

When the first put the waterline in it was soft water and thus added salt to the plants. We definitely struggle without a shade cloth. It's just too hot in there from May through September, so each year I have to start out new. This does have some advantages--don 't need to worry about watering in the summer, can do thorough cleaning of greenhouse and bleach it out, and can make cuttings to start again. One thing I dislike about it being attached to the school is that I cannot give a key to a student to work out there or come in to do work/water at breaks. Good luck!

Lori Berget -TriCounty

No response

Rick Reese -Edgerton

Don 't ask for too much you might get it—there 's lots of work that needs to be done at the expense of something else.

Jeff Zobeck-Ag Instructor at Gresham Community School

Our philosophy is not to compete with local greenhouses for business too much. Mainly use the greenhouse as an educational tool and to do some real local projects. It's not a huge fundraiser for us. Mainly look to offset costs and maintain greenhouse with sales and donations.

Steve Leistico -Waterloo High School

Great facility—a large part of our program. This semester I have 2 sections with 24 kids in one and 22 in the other.